CLAIMS

1. An apparatus for dispensing volumes of liquids, comprising:

a hinged septum having a flap inclined with respect to the longitudinal axis of a liquid channel, and

a deposition device for depositing liquid on the flap, wherein the deposition device is arranged to contact the flap.

2. The apparatus of claim 1, wherein

a rim of the flap is substantially matching to the contour of an inner wall of the liquid channel, such that the liquid channel may be sealed along the rim of the flap.

3. The apparatus of claim 1, wherein

the hinged septum provides well-defined initial or finishing conditions when dispensing volumes of liquids.

4. The apparatus of claim 1, wherein

the flap is fabricated from an elastic foil.

5. The apparatus of claim 1, wherein

the flap subdivides the liquid channel into a first chamber and a second chamber when the latter is in the sealed state.

6. The apparatus of claim 1, wherein

the flap is attached to a hinge that exerts an elastic restoring force on the flap directed toward the first chamber.

7. The apparatus of claim 1, wherein

the flap has a contacting and drainage surface for accommodating liquid.

8. The apparatus of claim 1, wherein

the deposition device is arranged to contact a face of the flap that faces the first chamber when the hinged septum is properly installed in the liquid channel.

9. The apparatus of claim 1, wherein a rim of the flap contacts the inner wall of the liquid channel, forming a liquid-tight seal therewith, thereby forming a valve, such that, in the sealed state, the liquid channel will be blocked with respect to leakage of liquid from a second chamber into a first chamber, while leakage of liquid from the first chamber into the second chamber will be possible when the flap is swung to an opened position by an actuating device of the deposition device.

10. The apparatus of claim 1, wherein

only a single, narrow hinge attached to the flap near its rim is provided.

11. The apparatus of claim 1, wherein

the hinge is configured in the form of a leaf-spring hinge.

12. The apparatus of claim 1, wherein

the hinge and flap form a monolithic structure.

13. The apparatus of claim 1, wherein

the hinge is fixed to a fastener which may be fixed to a tubing section comprising the liquid channel and which is provided with an aperture through which the deposition device for depositing liquid in the liquid channel may be inserted and extends beyond the edge of an inner wall at the end of the tubing section.

14. The apparatus of claim 1, wherein

the hinge is fixed to the liquid channel.

15. The apparatus of claim 1, wherein one end of the hinge is attached to the flap and its other end is attached to a gasket base.

16. The apparatus of claim 15, wherein the hinge, flap, and the gasket base form a monolithic structure.

17. The apparatus of claim 1, wherein the hinge and the flap, as well as the gasket base provided, if any, are fabricated from a thin, flexible, elastic foil.

18. The apparatus of claim 15, wherein the gasket base and a neighboring part of the hinge configured in the form of a leaf-spring hinge contact the end of the tubing section transverse to the liquid channel on which tubing section a fastener is fixed that is provided with an aperture through which a deposition device for depositing liquid in the liquid channel may be inserted and extends beyond the edge of an inner wall at the end of the tubing section, wherein the gasket base and neighboring part of the leaf-spring hinge are forced against the end of the tubing section by the fastener, and form a liquid-tight seal therewith, when the hinged septum is properly installed.

19. The apparatus of claim 18, wherein exerting pressure on a section of the fastener extending beyond part of an end of the tubing section in the direction of the end of the liquid channel induces a pretensioning of the leaf-spring hinge that exerts an elastic restoring force on the flap acting along the direction of the arrow, i.e., toward the end of the tubing section, in order that the liquid channel will be automatically sealed off by the flap.

20. The apparatus of claim 1, wherein the rim of the flap is in the form of an ellipse.

21. The apparatus of claim 20, wherein the hinge is arranged in the vicinity of the major axis of the ellipse.

22. The apparatus of claim 1, wherein the foil has a thickness that is a great deal less than either the width of the flap, measured across its rim, or the inner diameter of the liquid channel in the vicinity of the sealing surface.

23. The apparatus of claim 22, wherein the thickness of the foil is less than 1/50 of either the width of the flap, measured across its rim, or the inner diameter of the liquid channel in the vicinity of the sealing surface.

24. The apparatus of claim 1, wherein the foil is configured such that it may swivel and/or twist and/or buckle when acted upon by the restoring force exerted by the elastic hinge.

25. The apparatus of claim 1, wherein the contacting and drainage surface on the flap has a roughened surface for guiding liquid.

26. The apparatus of claim 25, wherein the roughened surface consists of a number of mutually parallel microchannels.

27. The apparatus of claim 25, wherein the roughened surface has a sawtooth profiled cross section at an angle to the microchannels.

28. The apparatus of claim 1, wherein the contacting and drainage section on the flap has hydrophilic and/or hydrophobic liquid pathways.

29. The apparatus of claim 26, wherein the microchannels and/or liquid pathways extend away from the hinge.

30. The apparatus of claim 27, wherein the microchannels and/or liquid pathways extend away from the hinge.

31. A liquid-separation equipment comprising:

a hinged septum having a flap inclined with respect to the longitudinal axis of a liquid channel, and

a deposition device for depositing liquid on the flap, wherein the deposition device is arranged to contact the flap.

32. A method for dispensing volumes of liquids, comprising the steps of:

generating well-defined initial or finishing conditions when dispensing volumes of liquids, by using a flap of a hinged septum having a flap inclined with respect to the longitudinal axis of a liquid channel, and

using a deposition device to deposition a liquid on a surface of the flap.

33. The method of claim 32, further comprising a step of using the deposition device as an actuating device for swinging the flap from a closed position to an opened position.